What we claim is:

1. A relay device among a plurality of relay devices belonging to a single group or divided into two or more groups comprising:

a monitoring portion for monitoring states of other relay devices belonging to the same group; and

a load balancing receiver for load balancing receiving packets with the other relay devices or for providing redundancy based on the states of the other relay devices.

2. The relay device as claimed in claim 1 wherein the monitoring portion monitors whether or not the other relay devices are in an enabling state of relaying packets, and the load balancing receiver load balances the receiving packets with the relay devices in the enabling state of relaying packets or provides the redundancy.

3. The relay device as claimed in claim 1, further comprising a group table preset,

the load balancing receiver determining, based on the group table, whether or not to receive packets.

4. The relay device as claimed in claim 3 wherein the group table allocates a preference and a weight indicating a degree of communication load to be accepted within the group to every relay device belonging to the same group, and the load balancing receiver, based on the preference and the weight, determines receiving packets load balanced or for which the redundancy is provided.

5. The relay device as claimed in claim 1 wherein the monitoring portion is provided with a periodic transmitter for periodically transmitting a control packet indicating a state of its own device to an adjoining relay device belonging to the same group, and an adjoining device monitoring portion for monitoring the state of the other relay devices by receiving the control packet transmitted from the adjoining relay device.

6. The relay device as claimed in claim 5 wherein when receiving no

control packet transmitted from the periodic transmitter of the adjoining relay device, the adjoining device monitoring portion determines that the adjoining relay device is in a disabling state of relaying packets, and the load balancing receiver, based on the determination result, determines receiving packets load balanced with the relay devices in an enabling state of relaying packets or for which the redundancy is provided.

7. The relay device as claimed in claim 5 wherein the control packet indicates a preference of its own device and a weight indicating a degree of communication load accepted within the group.

8. The relay device as claimed in claim 1 wherein the load balancing receiver is further provided with an accepted load setting portion for setting an accepted load.

9. The relay device as claimed in claim 3 wherein the load balancing receiver is provided with a packet receiver for receiving packets, a receiving algorithm setting change portion for changing a receiving algorithm of the packet receiver based on the group table, and a receiving algorithm setting portion for setting the receiving algorithm changed to the packet receiver.

10. The relay device as claimed in claim 9 wherein the receiving algorithm is an algorithm for relaying the receiving packets to a single arbitrary relay device so that the packets are load balanced with the relay devices belonging to the group or the redundancy is provided.

11. The relay device as claimed in claim 1 wherein the relay devices belonging to the same group are connected to a same transmission line, and a same physical address or a same layer 3 address is assigned to the relay devices.